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C H O R E O M A N I A :

AN HISTORICAL SKETCH.

WITH SOME

ACCOUNT OF AN EPIDEMIC OBSERVED IN MADAGASCAR.

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## CHOREOMANIA.

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AMONGST the epidemics of the Middle Ages, one of the most peculiar, and to the psychologist one of the most interesting, is the dancing mania which, for at least two centuries and a half, appeared at irregular intervals in various parts of Europe. It received different names in different countries. Throughout Western Europe it was called chorea, chorea Sancti Viti, choreademonomania, the devil's dance, or the dance of St John; while in Italy, in more modern times, it was known as tarantism. The same disease has been observed in Abyssinia about the beginning of the present century, where it was called tigretier.

It is not my design to give a full account of this malady in its various epidemics, but simply to sketch some of its leading historical features, for without some acquaintance with its history, the following narrative of what was observed in Madagascar, would be imperfectly understood. This disease, which we shall name Choreomania, was, as I have said, originally called chorea, or Saint Vitus's dance; but these terms are now inseparably, though inaptly, applied to another and perfectly distinct nervous affection. From this change in name, along with the disappearance of the original chorea from Europe, considerable confusion has arisen. Not a few authors have regarded the descriptions of chorcomania by the older writers as applying to modern chorea, and as these are entirely inconsistent with our everyday experience of the latter disease, they have considered the accounts of the epidemics of choreomania during the Middle Ages as extravagant and untrustworthy. The short allusion which Mason Good has made to the original disease in his classic work<sup>1</sup> indicates that he had fallen into this error. In a similar way, that prince of modern physicians, Joseph Frank, proceeding upon the assumption that choreomania is identical with chorea, says,—“Those who pretend that in 1374 chorea became epidemic, evidently confound it with the cereal malady (*ergotism*). In truth, however, chorea does not exhibit itself generally in an epidemic form, but, with some exceptions, is always sporadic.”<sup>2</sup> Now, it is perhaps possible that one of the forms of ergotism may be liable to be mistaken for the chorea of modern nosologists; it could not have been confounded with choreomania, with which it has nothing in common. It is sufficient, however, to say that no one maintains that the disease referred to by Joseph Frank was epidemic in 1374. In one of

<sup>1</sup> Dr Good's Study of Medicine. 4th edition. Vol. iii. p. 33.

<sup>2</sup> Vide Practice of Medicine. By Joseph Frank. Art. Chorea.

the most recent, and undoubtedly one of our best text-books on medicine by Dr Aitken,<sup>1</sup> the same confusion occurs. Thus, treating of chorea, he writes as follows:—"In Germany, it was said for two centuries to have been epidemic, and the patients, probably many of them maniacs, were wont to join in frantic dances; and as late as 1673, they went in procession to the church of some favourite saint, of whom St John, St Guy, and St Vitus were the most reputed."<sup>2</sup> Now, the chorea of modern nosologists was never said to have been epidemic; that which was epidemic was clearly a different disease altogether.

Sir Thomas Watson<sup>3</sup> has appended to his lecture on chorea a short statement regarding the original disease, which proves that he recognises its true character. "The name," he justly remarks, "was applied, and much more suitably, to another set of symptoms of a most singular kind, concerning the real occurrence of which we might well be sceptical if we had not the authentic narratives of many instances of such disorder from different persons of credit, as well in this country as in others. . . . An affection characterized by movements which cannot be called spasmodic, but are rather owing to the irresistible propensity to muscular action, increased sometimes to a sort of mania by the force of imitation, or by the sound of music. It is the volition in this case that is morbid or perverse."<sup>4</sup> To increase the confusion, some authors have classed with choreomania many anomalous forms of nervous manifestation, some of which are evidently the result of organic disease of the nervous centres. Such are the cases recorded by Sagar and others, of patients who could only go forwards or backwards, or these singular diseases described as *rotatio* and *malleatio*.

Choreomania is undoubtedly distinct from spasmodic chorea on the one hand, and from these singular forms of perverted motion on the other. The various epidemics have been admirably described by Hecker, to whose work<sup>5</sup> those desirous of information may refer, and in which the curious will find references to and quotations from the original authorities on this subject. Some very interesting information is also to be found in Hæser's History of Epidemic Diseases.<sup>6</sup>

Choreomania may be defined as a psycho-physical disease, in

<sup>1</sup> The Science and Practice of Medicine. By William Aitken, M.D. New ed. Vol. ii. pp. 337 and 338.

<sup>2</sup> It is a popular mistake to suppose that the patients suffering from this disorder resorted to the shrine of St John, as they did to that of St Vitus, for relief; the origin of the title, *dance of St John*, requires a perfectly different explanation.

<sup>3</sup> Lectures on the Principles and Practice of Physic. By Thomas Watson, M.D. 4th ed. Vol. i. p. 579.

<sup>4</sup> Paracelsus conceived that in the dancing mania the volition was temporarily suspended, not prevented.

<sup>5</sup> The Epidemics of the Middle Ages. From the German of J. F. C. Hecker. 3d ed. Lond. Pp. 80 to 167.

<sup>6</sup> Geschichte der Epidemischen Krankheiten. Von Dr H. Hæser. 8vo, Jena, 1865.

which the will, intellectual faculties, and moral feelings are all more or less perverted, with an irresistible impulse to motion, and an insane love of music, often sporadic, but with a tendency in certain circumstances to become epidemic.

The first appearance of the dancing mania on record, occurred at Kolbig, in the year 1021. Unfortunately, we cannot rely upon the accuracy of the accounts of it that have come down to us, as they are undoubtedly mixed up with the fabulous. The simple fact that such an event occurred can alone be accepted as historical; beyond this there is no certainty. The tradition is, that a dozen of country people having been seized with this disease during the time of divine service, the priest, Ruprecht, cursed them to dance and howl for twelve months for having interrupted the worship, and that this curse was only removed by the prayers and intercession of two bishops, that four of the twelve died, and the remaining eight continued to suffer from tremblings of the limbs during the rest of their lives. Then, again, in the year 1278, two hundred persons were seized with it at Utrecht, and while dancing on the Mosel Bridge, the structure gave way, and many of them perished.

But perhaps the first remarkable outbreak occurred in the year 1374, under the name of St John's dance, because it began on St John's day, which was observed in the earlier centuries in the most outrageous manner, with mirth, debauchery, and dancing. It seems to be this epidemic which is referred to by Frank, and, strangely enough, supposed by him to have been owing to ergotism. "At Aix la Chapelle," says Hecker, "assemblages of men and women were seen who had come out of Germany, and who were united by one common delusion. They formed circles hand in hand, and, appearing to have lost all control over their senses, continued to dance, regardless of the bystanders, for hours together in wild delirium, until at length they fell to the ground in a state of exhaustion. They then complained of extreme oppression, and groaned as if in the agonies of death until they were swathed in cloths bound tightly round their waists, upon which they again recovered." The swathing, which was rendered more effective by the aid of a turn-stick, was resorted to on account of tympany. While dancing they were said to have been insensible to external impressions, but haunted by religious visions and caprices of various kinds. The attacks often commenced with convulsions, difficulty of breathing, and mental depression. Beaked shoes very much excited the resentment of the dancers. In Liege, the manufacture of these fashionable articles was forbidden by law. Red colours seem to have been even more offensive, the influence of which, Hecker suggests, might lead us to imagine an extraordinary accordance between this spasmodic malady and the condition of infuriated animals: the fact, however, that in other epidemics the affected were enraptured with red colours, goes against this ingenious



supposition. We shall have occasion again to notice this point, when treating of the disease as observed in Madagascar. "After the patients had recovered by means of exorcisms, they related that during the attack they felt as if standing in a stream of blood."<sup>1</sup> This epidemic spread rapidly throughout Germany, Belgium, and the neighbouring countries—hundreds of all ages and both sexes being led away by the sympathetic contagion, and this outbreak only finally ceased after a period of four years.

Exorcisms were resorted to by the priests when pater nosters and simpler means failed; but we are assured that kicks and blows heartily administered by the bystanders often afforded still greater relief, and were generally used as adjuvants to other means, and, strange enough, even gladly borne by the sufferers. The common people ascribed this calamity to the immorality of the priests, "*Vulgus autem apud Leodium dicebat, quod hujusmodi plaga populo contigisset eo quod populus male baptizatus erat, maxime a Presbyteribus suas tenentibus concubinas.*"

In the following century the dancing mania reappeared at Strasburg, as St Vitus's dance, and continued, more or less, for a century and a-half. The follies and vices of the previous epidemics were repeated. The patients resorted to the shrine of St Vitus in crowds, where they were cured—hence the name. The disease was common over northern Germany, France, and Belgium. It had a liking to the Rhine Valley; few of the cities in this district escaped this strange plague. The reason of this geographical predilection does not appear. In this new outbreak both sexes were affected, but women principally, and the upper classes and clergy were almost exempt. As may easily be supposed, profligacy and imposture became associated with these epidemics. Doubtless Paracelsus had too good reasons for naming it "the lascivious dance." The civil power in some places had to interfere for the suppression of these public exhibitions; but in others the magistrates employed relays of musicians and dancers for the relief of the affected. We need not be surprised that the loose and abandoned should feign a disease which gave them such an amount of license; but many were said to have acted in earnest the part they had assumed from design. Indeed, so real was the disease, and so great the frenzy of some of these poor, deluded mortals that they actually "dashed their brains out by running against walls and corners of buildings, or rushed headlong into rapid rivers where they found a watery grave."

While the morbid impulse lasted the physical endurance was truly extraordinary. This point has been insisted upon by every writer. Thus many hundreds continued dancing for days and nights in the public places of Strasburg without tasting food. From what I have myself witnessed, I can well enough believe the account by Felix Plater, of a case which certainly to many

<sup>1</sup> *Vide* Haeser, op. cit.

would seem almost incredible. Without giving his words, his story is, that he remembered a girl who had the dancing mania, and who exhausted several powerful men, commissioned by the authorities to dance with her. They relieved each other by turns, and this continued above four weeks, when she fell down exhausted, and was carried to an hospital where she recovered. She had remained in her clothes all the time, entirely regardless of her lacerated feet. She merely sat down occasionally to take some nourishment, during which the hopping movement continued.

The disease known as tarantism, and which was once common in Italy, was undoubtedly choreomania. The writings of Ferdinando, Baglivi, and others contain very full descriptions of it. While we may reasonably doubt the traditional etiology of the affection, we must accept the evidence of so many trustworthy and competent observers regarding the symptoms of which they were eye-witnesses.

The tarantula or aranea tarantula of Linnæus, which many regard as the phalangium of the Greek and Roman writers, is the name given to a spider, common not only in Apulia but in various parts of Europe and Asia. The effects of the bite of the tarantula have never been very satisfactorily made out. The subject is an interesting and curious one, upon which much has been written. A strong argument against the notion that choreomania was so caused is this, that whereas the spider has very probably existed in Italy for ages, choreomania only appeared there in the fourteenth or fifteenth century. Besides, the phalangia were known and carefully described by many ancient naturalists and physicians, but none of these ascribe to their bite the power of producing this strange disorder. Paulus Ægineta,<sup>1</sup> treating of the bites of these spiders, mentions as *local* symptoms, redness, coldness, and itehiness of the part, and, *constitutionally*, grousing, trembling, pain in the stomach, vomiting, erections of the penis, dysuria, and cold perspirations,—all probable enough results, and quite in accordance with what we know of the action of animal poisons.

The premonitory symptoms of tarantism were melancholy and lassitude, sometimes sleeplessness, with excitement, and occasionally tremors and vomiting. These symptoms often appeared in those bitten by the tarantula, when predisposed to the malady; not that the bite actually produced the disease, but in a nervous, excitable person, fully convinced that the poison produced such symptoms, and brooding over a bite real or imaginary, we can easily understand how the terror itself should induce this psychological condition. We must remember that the most ridiculous opinions prevailed even among scientific men on this subject. Almost every species and variety of spider, not only in Italy, but everywhere, was considered poisonous. Scaliger affirms that so virulent were some of the spiders found in Gaseony, that "if trodden upon, so

<sup>1</sup> Paulus Ægineta, vol. ii., 8vo, p. 169. Syd. Soc. Ed., Lond.

as to be crushed, their poison would penetrate through the very soles of the shoes." No wonder then if a nervous girl who believed herself even to have been in contact with this loathed insect, should become affected with what she understood to be the inevitable consequences of the poison. Again, when these symptoms made their appearance, the patient, influenced by the universal delusion, readily fancied that they must have been bitten.

From the premonitory melancholy, patients were aroused by the sound of music; and a great variety of instruments was in use. Baglivi<sup>1</sup> enumerates among the instruments employed to cure tarantism, the drum, timbrel, shepherd's pipe, lyre, and cymbal, along with fiddles and flutes of various kinds. If we can credit that celebrated author, and in this particular we cannot doubt his statement, some patients were quite unaffected by certain of these musical instruments, yet immediately responded to another, and forthwith began to dance. In fact, there seems to have been a wonderful amount of caprice in this respect; but human credulity cannot believe that this dislike of certain instruments and partiality for others, was, as Baglivi asserts, dependent upon the size, colour, or virus of the spider which had inflicted the wound.

Whatever differences there may have been in regard to the instrument, all agreed in their love of quick and lively music, and even the least musical seem, while under this disease, to have become so wonderfully acute and just in their perception of harmony, that a false note was unendurable.

Bands of music traversed the country to enure the malady, and no doubt often caused, or at least encouraged it. The dancing generally continued from ten to fourteen hours daily, and from three to six successive days, and this amount of exertion we are told gave rise to no apparent fatigue. As in St Vitus's dance, so in tarantism the mania showed a tendency to recur annually, and was cured every year by resorting to the means we have described. Whether a foregone belief that the disease was not to be eradicated, but must necessarily return, by preying upon the mind produced this result, or whether, as is probable, some other cause operated in this way, it is impossible to say.

The ordinary termination of the disease seems to have been in recovery, and, as we said, its duration was comparatively limited. The other phenomena of the disease were not so uniform. Some, in their infatuation, cast themselves into the sea or into rivers, courting destruction, others were buried up to the neck in earth to obtain relief. Many afflicted by melancholy frequented the tombs, while others, labouring under sexual excitement, abandoned themselves to their passions. Baglivi says that, "maids and women, otherwise chaste enough, without any regard to modesty, fall a sighing, howling, and into very indecent motions . . . they

<sup>1</sup> Baglivi, *Dissertatio I.—De Anatome, morsu, et effectibus Tarantulæ*. Lugduni in Batavis, 8vo, 1699, pp. 35, 38.



love to be tossed to and again in the air and the like. . . . Others you cannot please, unless they be soundly drubbed on the breech, heels, feet, and back." Unlike the St John's dancers in Germany, those affected by tarantism generally liked red colours; green seems also to have been much admired. It is unnecessary to enter into a minute description of the tigretier, or dancing mania of Abyssinia. The account of it in Hecker's work, to which we have referred, or the original by Pearce,<sup>1</sup> is within the reach of those interested in the subject. A short summary is all that is necessary, as this will suffice to show its identity with the disease in Europe.

(a.) It was more or less epidemic, chiefly affecting women.

(b.) It began with symptoms of constitutional disorder, at first febrile, which sometimes gave place to a lingering marasmus, with an affection of speech, and was occasionally fatal.

(c.) It was characterized by an intense craving for music, and an impulse to dance, leap, or run, with an almost supernatural power of physical endurance while the mania lasted.

(d.) It was regarded by the natives as a demoniacal possession.

All these points are brought out in the simple, and upon the whole trustworthy, narrative of Nathaniel Pearce, who was himself an eyewitness of what he relates, and who had the misfortune of observing it in his own wife. One thing is very remarkable in his account of the tigretier, and in this respect it differs a little from what has been observed elsewhere, viz., the *very* marked constitutional disorder preceding and accompanying the disease, proving—that the most serious physical disease may be determined or caused by psychological influences.

What affinity the leaping ague in Scotland had to true choreomania, I shall not attempt to decide. The following account of it will illustrate its character:—

"Those affected complain of pain at the lower part of the back, to which succeed convulsion fits, or fits of dancing, at certain periods. During the paroxysms, they have all the appearance of madness, distorting their bodies in various ways, and leaping and springing in a surprising manner, whence the disease has acquired its vulgar name. Sometimes they ran with astonishing velocity, and often over dangerous passes, to some place out of doors which they have fixed on in their minds, or perhaps even mentioned to those in company with them,—then drop down exhausted. At other times, especially when confined to the house, they climb in the most singular manner. In cottages, for example, they leap from the floor to what are called the baulks, or the beams by which the rafters are joined together, springing from one to another with the agility of a cat, or whirling round one of them with a motion resembling the fly of a jack."<sup>2</sup>

<sup>1</sup> Pearce's Abyssinia. Lond., 1831.

<sup>2</sup> Sinclair's Statistical Account of Scotland, quoted by Hecker.

Having thus referred to choreomania, as has been seen in various parts of Europe and in Abyssinia, I shall proceed to give a short account of this singular disease as observed by myself and others in Madagascar,—a disease so strange that I might well have hesitated to record the facts, if they had not been witnessed by so many whose character and judgment place their evidence beyond question.

In the month of February 1863, the Europeans resident at Antananarivo, the capital of Madagascar, began to hear rumours of a new disease, which it was said had appeared in the west or south-west. The name given to it by the natives was Imanenjana, and the dancers were called Ramanenjana, which probably comes from a root signifying to make tense. The name did not convey any idea of its nature, and the accounts given of it were so vague as to mystify rather than enlighten. After a time, however, it reached the capital, and in the month of March began to be common. At first, parties of twos or threes were to be seen, accompanied by musicians and other attendants, dancing in the public places; and in a few weeks these had increased to hundreds, so that one could not go out of doors without meeting bands of these dancers. It spread rapidly, as by a sort of infection, even to the most remote villages in the central province of *Imerina*, so that, having occasion to visit a distant part of the country in company with an Englishman, we found even in remote hamlets, and, more wonderful still, near solitary cottages, the sound of music, indicating that the mania had spread even there.<sup>1</sup>

The public mind was in a state of excitement at that time, on account of the remarkable political and social changes introduced by the late King Radama II. It is unnecessary here to explain the nature of these changes, or the way in which they moved the people generally, and roused the superstitious feelings of the lower classes. A pretty strong anti-Christian, anti-European party had arisen, who were opposed to progress and change. This strange epidemic got into sympathy, especially in the capital, with this party, and the native Christians had no difficulty in recognising it as a true demoniacal possession. There was universal consternation at the spread of this remarkable disease, and the consternation favoured its propagation.

Those affected belonged chiefly, but not by any means exclusively, to the lower classes. The great majority were young women between fourteen and twenty-five years of age; there were, however, a considerable number of men to be seen amongst the dancers; but they certainly did not exceed one-fourth of the entire number, and these also belonged mostly to the lower orders of society.

Very few, indeed scarcely any, Christians came under this in-

<sup>1</sup> The rapidity was certainly remarkable, but not to be compared with what is related of the outbreak of the child-pilgrimage of Erfurt, when, on 15th of July 1237, one thousand children assembled, as if by instinctive impulse, without preconception, and unknown to their parents.

fluence, no doubt partly because the general spirit of dissatisfaction and superstitious unrest did not affect them directly. Their sympathies were rather *with* those changes, political and social, which disturbed the masses. They were, so to speak, beyond the reach of the current. Their exemption may be partly explained by their superior education, mental and moral, but was also very manifestly owing to their firm conviction that the whole affair was a demoniacal possession of their heathen countrymen which could not affect them as Christians. They could thus look at it as outsiders, with the interest of observers, without the fear which, in such a malady, is one of the means of its propagation.

The patients usually complained of a weight or pain in the præcordia, and great uneasiness, sometimes a stiffness about the nape of the neck. Others, in addition, had pains in the back and limbs, and in most cases there seems to have been an excited state of the circulation, and occasionally even mild febrile symptoms. One or more of these premonitory symptoms were frequently observed; there were numerous cases where they were absent. After complaining, it may be one, two, or three days, they became restless and nervous, and if excited in any way, more especially if they happened to hear the sound of music or singing, they got perfectly uncontrollable, and, bursting away from all restraint, escaped from their pursuers, and joined the music, when they danced sometimes for hours on end with amazing rapidity. They moved the head from side to side with a monotonous motion, and the hands, in the same way, alternately up and down. The dancers never joined in the singing, but uttered frequently a deep sighing sound. The eyes were wild, and the whole countenance assumed an indescribable, abstracted expression, as if their attention was completely taken off what was going on around them. The dancing was regulated very much by the music, which was always the quickest possible—it never seemed to be quick enough. It often became more of a leaping than a dancing. They thus danced to the astonishment of all, as if possessed by some evil spirit, and, with almost superhuman endurance, exhausting the patience of the musicians, who often relieved each other by turns, then fell down suddenly, as if dead; or, as often happened, if the music was interrupted, they would suddenly rush off as if seized by some new impulse, and continue running, until they fell down almost, or entirely, insensible. After being completely exhausted in this way, the patients were taken home, the morbid impulse apparently in many cases destroyed. Sometimes the disease, thus stopped, never recurred; but more frequently there was a return. The sight of dancers, or the sound of music, even in the distance, or anything which, by association, seemed connected with the disease, determined a recurrence of the fit.

The patients were fond of carrying about with them sugar-canes. They held them in their hands, or carried them over the shoulder



while they danced. Frequently, too, they might be seen going through their singular evolutions with a bottle of water upon their heads, which they succeeded wonderfully in balancing. The drum was the favourite instrument, but others were used, and all were acceptable. When there was no musical instrument to be had, the attendants beat time with their hands, or sung a tune which was a favourite amongst the Ramanenjiana. There is a sacred stone in a plain below the city, where many of the kings of Madagascar have been crowned. It is a large, rather irregular, stone, partly built, so as to round it off, and is about eight feet high, and twelve feet in diameter. This stone was a favourite rendezvous for them. They danced here for hours on end, and concluded by placing the sugarcane, as a sort of offering, upon the stone.

The tombs were also favourite places of resort for these dancers. They met in the evenings and danced by moonlight for half the night, or longer, amongst the graves.

Many of them professed to have intercourse with the departed, and more particularly with the late queen. In describing their sensations afterwards, some said that they felt as if a dead body was tied to them, so that with all their efforts they could not shake themselves clear of it; others thought that there was a heavy weight continually dragging them downwards or backwards. They disliked, above all things, hats and pigs.<sup>1</sup> The very sight of these objects was so offensive that, in some cases, it threw them into a kind of convulsion; but more frequently excited their rage. Still more inexplicable was their dislike of every article of dress of a black colour. Swine are reckoned unclean by several tribes in Madagascar, and might thus be an object of superstitious horror. Hats, as associated with foreigners, might similarly be objected to; but what is there in a colour to excite antipathy? Yet this caprice has been so common in this disease, in all its recorded epidemics, as to deserve attention. This phenomenon was likewise observed in the child-pilgrimages of the thirteenth century, which, towards the end, began to assume some of the characteristics of choreomania. Feuchtersleben, speaking of the sense of sight, says,—“The several colours have a decided, not fully defined, but individually modified, psychical effect. In general, the positive colours, red, yellow, etc., excite the mind—the negative, blue, etc., calm it.” If it be difficult to ascertain the psychical effect of colours in health, how much more so in disease. The sense of sight is probably not more depraved than the other faculties and senses. In Abyssinia we have seen that the faculty of speech was disordered. The most intellectual of all the senses, that of hearing, is always affected to a remarkable degree, as evidenced not only by the morbid desire for music, but by the illusions and delusions connected with this special sense. All this points to a morbid condition, not only of the motor

<sup>1</sup> On this subject, see Ellis's *Madagascar Revisited*, 8vo. Murray, Lond. 1867.



centres, but of the most important ganglia at the base of the brain,—a morbid condition chiefly functional in character, and produced by psychical causes.

The disease was associated with national prejudices, religious and political. Did these originate it? I think not. They simply afforded, as it were, the condition, or one of the conditions of its epidemic manifestation. They formed the bond of sympathetic union among the affected. To become epidemic, this disease must seize some popular idea or superstition, at once so *firmly* believed as to lay hold of the heart of the people, and so *generally* as to afford scope for the operation of pathological sympathy. Thus, chorcomania was associated with the religious superstitions of the Middle Ages. Manifestly hostile to the priests,—so deep was the hold which the church exercised over even its *dissatisfied* children, that exorcisms, as we have seen, became one of the most potent means of cure. In Madagascar, in the same way, those who know the respect of the natives for their ancestors, and their unbounded reverence for their resting-places, might *à priori* have decided the form which such a mania would assume in that country. It must further be remembered that choreomania never appears as an epidemic, except when the public mind is deeply agitated by some general cause. In illustration of this, it will be remembered, as Hecker and others have pointed out, that choreomania, in its first outbreak, followed closely upon the black-death, “and was to be ascribed to the excitement of men’s minds, and the consequence of wretchedness and want.” The mental and moral state of the people, induced by such great calamities as the black-death and the inundations of the Rhine, and by the political and religious conditions of the period—the feuds of the barons—the corruption of the church and of public morals, the licentious exercise of power, or the unwarranted resistance of authority, were all exciting causes of its epidemic manifestation.

The disease was rarely fatal; still a few cases of death undoubtedly happened, and these only occurred, so far as I am aware, where the patient was restrained from joining in the dances. It would seem that *these* actually died from pent-up passion or excitement. The dancing, no doubt, was so far salutary. The music served to regulate and control the wild muscular movements that might otherwise have proved injurious. A most remarkable fact is, that the mere physical exercise, prodigious and long-continued as it is in this disease, seems perfectly harmless. I never heard of its having proved fatal, nor even to have produced abortion in pregnant women,—a circumstance observed by Burton<sup>1</sup> in his account of the earlier epidemics, and enforced with more than his usual pith and quaintness.

<sup>1</sup> Burton’s *Anatomy of Melancholy*, p. 80. Lond., Tegg, 1863. Robert Burton was born at Lindley, Leicestershire, 8th July 1576.

The question of the reality of these phenomena requires a few words, although what has been said above in regard to the disease in Germany applies equally to Madagascar. No one who saw it can doubt that it was perfectly real as a psychopathy, and no one of candour or discrimination will deny that a certain amount of imposture *was* practised. It was more difficult, however, than one might suppose to feign this disease and act it out consistently. The look, manner, movements, and power of enduring physical exertion, were sufficient to distinguish the simulated from the real. It is remarkable, and should never be lost sight of, how often the most contradictory and opposite feelings and motives seem to be mixed up in such cases. It can easily be understood how many of these Ramanenjana may have become the victims of a strong morbid impulse, which they at first either feigned or fostered.

How wonderful is the history of human delusion, and how nearly the strongest delusions in some of their aspects border on imposture! Witness the burning for witchcraft in Scotland: never was there any want of witches to burn while the demand for them continued. Poor infatuated women and men were found to confess to the most impossible of crimes, with certain death staring them in the face, so long as the public superstition demanded such victims. A sad record of human folly—darker than anything else I know of—is to be found in some of the volumes of the Wodrow Society's publications.

It must never be forgotten by the physician how strangely interwoven is the spiritual and the physical in man. Especially is it to be remarked how physical diseases resulting from psychical causes will often be cured by strong mental impressions. Hysteria has thus been often cured. Boerhaave cured epilepsy in children by a threat: the suicidal monomania of the Milesian girls was overcome by the fear of their bodies being exposed after death. In the same way, in Madagascar, the fear of punishment alone, or combined with moral discipline, prevented the mania in many families, when such means were adopted by my advice. Legal enactments almost extinguished it for a time, by confining the affected to their own houses, and preventing the public performance of music.

Since this first, and most remarkable outbreak, the disease has occurred annually every spring. We find in the "Post" the following account of the slighter epidemic of 1864, evidently written by a European resident in the island:—

"The Queen has been greatly alarmed at an epidemic of the Ramanenjana, which has raged over the capital. This disease is a sacred malady, of an extraordinary character, and of which the doctors understand nothing (too true!). The patient is seized with convulsions, raises savage cries, and rolls on the ground in the streets. The population is almost entirely soon stricken with the same malady, and great processions of people pass along the streets, creating disorder, and such movements are often taken advantage

of to upset a throne or overturn a ministry. The unfortunate Radama was a victim of the Ramananjana of 1863."

Although this account is exaggerated, and the facts not detailed with any accuracy or elegance, it tends to illustrate the impression caused by even a mild epidemic of choreomania in those who for the first time witness it. From inquiries that I have made, I find that a similar disease has existed in Madagascar for at least fifty years, and is called "Ambo." It seems in no respect different from choreomania, except that it is sporadic.

From a careful consideration of these facts, we may safely deduce the following propositions:—

(a) Choreomania is a distinct psycho-physical disease, with its leading features clearly marked and uniform,—to be distinguished from modern chorea and from organic nervous disease.

(b) There is always as an ESSENTIAL part of it an uncontrollable impulse to dance, and a morbid love of music; very generally also, peculiar caprices regarding certain colours and objects, the power of speech being occasionally affected, and moral mania common.

(c) The subjects of this disease are those most liable to hysterical diseases, viz., young women about the age of puberty, and men of an excitable temperament.

(d) Although it may be sporadic, it shows a tendency to become epidemic during periods of general excitement.

(e) In its epidemic form it is usually associated with some prevalent deep-rooted belief or superstition.

(f) It spreads by what we may call pathological sympathy.

(g) When epidemic, it is generally preceded by premonitory symptoms referable to the nervous system, and secondarily induces physical derangement, and sometimes even death.

It would be foreign to the design of this paper to enter into any of the interesting psychological questions which suggest themselves in connexion with this subject; such as, the nature of the changes on the nervous centres, the primary cause of such changes, and the organic lesions resulting therefrom; inquiries such as these must be of deep interest to the physician, the philosopher, and the divine. But this disease is of special practical interest to the magistrate and medical jurist. In Madagascar, this mania, in no small degree, tended to bring about the rebellion, which ended in the death of the sovereign and his ministers, and determined a revolution political and social in that vast island. Such an epidemic may occur again in India or other countries where British interests may be deeply involved; and in such cases it is important that the physician should know the disease, and be able to direct the authorities to a proper view of its nature and cure.

